Draft Compliance and Monitoring Plan

In compliance with the "Management Agency Agreement between the Central Valley Regional Water Quality Control Board and the United States Bureau of Reclamation" executed on December xx, 2008

January 1, 2009

Purpose

The purpose of the "Draft Compliance and Monitoring Plan" (Draft Plan) is to meet one commitment of the initial monitoring, reporting, and assessment program agreed to in the "Management Agency Agreement between the Central Valley Regional Water Quality Control Board and the United States Bureau of Reclamation" (MAA) executed on December xx, 2008. The MAA describes the actions Reclamation will take to meet the obligations allocated to it by the Salt and Boron TMDL for the lower San Joaquin River (TMDL). The MAA states:

> Reclamation will submit a *Draft Compliance Monitoring and Evaluation Plan* to the Regional Water Board. Where appropriate, the draft plan will propose the data and quantification methods used to evaluate the salt loads from DMC operations and salinity offset credits to be applied to the various elements of Reclamation's Action Plan.
>
> Data will include monitoring locations, parameters monitored, data collection methods, and data quality control. Included with the proposed quantification methods for salt load offset credits for each element of Reclamation's Action Plan will be a description of the salt mitigation benefit of each element and a clear explanation of how the proposed quantification method accurately quantifies the salt load effect.

The United States Bureau of Reclamation's (Reclamation) Action Plan (Action Plan) is attached as Appendix 1.

Organization of Draft Plan

The Draft Plan is designed to support the activities and the quarterly report required by the MAA, as well as to establish a clear methodology for describing salinity load reductions and offset credits. Within the MAA, Reclamation agreed to

a) provide mitigation and dilution flows to create assimilative capacity and to initiate stakeholder efforts to develop a Real Time Management Program;
b) implement existing projects that will offset a minimum of 25% of the excess DMC salt load as defined in the Basin Plan by July 1, 2010, provided that accounting rules for offsets allow for non-consumptive use releases; participation in projects that reduce salt load into the river; and other actions to provide assimilative capacity in the river;
c) implement the Action Plan as described;
d) submit quarterly progress reports to the Central Valley Regional Water Quality Control Board (Regional Board); and
e) seek additional funding to support salinity control efforts.

The Draft Plan addresses each of these actions. The Action Plan describes all of the actions contemplated by the MAA. Within the Action Plan, actions are divided into three major categories: Flow, Salt Load Reduction, and Mitigation. The Action Plan also described potential future actions. The Draft Plan is similarly organized, with a separate section to capture the status of potential future actions and the decision points at which these actions become reportable. For each action (and sub-action) a brief description, methodology, schedule, critical milestones, and reporting requirements are identified. An overall accounting methodology is described in order to summarize the effects of individual actions and a baseline methodology is described to determine the salinity load imported from Delta Mendota Canal (DMC) deliveries.

A. Flow Actions

Reclamation has agreed to provide mitigation and dilution flows to meet the Vernalis salinity and boron objectives. Historically, Reclamation has provided dilution flows from the New Melones Project and through purchases for the Vernalis Adaptive Management Plan. Flow actions include: dilution flows from New Melones and water acquisitions.

1. New Melones flows

Brief Description: Description should include goal of program (how it reduces salt load, when it applies, to what degree it can affect)

Methodology: *(include data source and qa procedures in each methodology)*

- Quarterly accounting of flows for water quality (methodology) using monthly averages (also fishery with coincident water quality??) – and should we have an accounting of contract water not delivered or just note where it exceeds 70 TAF for water quality?
- Quarterly accounting of assimilative capacity provided using monthly averages (methodology)
- Trend line of use of New Melones flows for Vernalis salinity (as a way of measuring progress of other actions?) – or include this in summary of actions.
- Status of new operating agreement
- Other issues affecting New Melones flows (fish flow objectives, lawsuits, etc.)

Schedule: *do we have a schedule for reducing reliance on New Melones?*

Critical Milestones:

Reporting Commitment: In the quarterly reports required by the MAA, Reclamation will use the described methodology. A sample quarterly report is attached as Appendix 2.

2. Water Acquisitions

Brief Description: Description should include goal of program (how it reduces salt load, when it applies, to what degree it can affect)

Methodology: *(include data source and qa procedures in each methodology)*

- Quarterly accounting of water purchases that provide assimilative capacity (methodology) using monthly averages, and indicating source of funding (CVPIA, EWA[1], VAMP, etc) *I don't think I'd include wetland deliveries unless we can figure out a way to determine if they actually provide assimilative capacity at any time.*
- Quarterly accounting of assimilative capacity provided using monthly averages (methodology) (quality of purchased water, timing)
- Trend line of use purchased flows for Vernalis salinity (as a way of measuring progress of other actions?) – or include this in summary of actions.
- Description of failed attempts to obtain water? (Sought X AF, only got Y AF) or of obstacles to purchases?

Schedule: *do we have a schedule for water purchases under various programs?*

Critical Milestones:

Reporting Commitment: In the quarterly reports required by the MAA, Reclamation will use the described methodology. A sample quarterly report is attached as Appendix 2.

[1] I'm not sure how we will account for EWA actions that are not in the San Joaquin. I think they would go into the baseline calculation.

B. Salt Load Reduction Actions

Reclamation is under a court order to provide drainage to its San Luis Unit, on the Westside of the lower San Joaquin River. As part of its efforts to provide drainage, Reclamation has historically supported the Westside Drainage Program through monetary grants and in-kind services. Reclamation recognizes there is still much to be done to implement the Westside Regional Drainage Program. Reclamation is also implementing its Drainage Feature Reevaluation Project, which selected reuse, recirculation, and evaporation ponds as its preferred alternative. Salt Load Reduction Actions include the Grasslands Bypass Project, the Westside Regional Drainage Plan, and conservation programs (Water Use Efficiency Grant Programs, Water Conservation Field Services Program, Water 2025 Grants Program, and the CALFED Water Use Efficiency Program).

1. Grasslands Bypass Project (use current monitoring program – available quarterly?)

   Brief Description: Description should include goal of program (how it reduces salt load, when it applies, to what degree it can affect)

   Methodology: *(include data source and qa procedures in each methodology) or refer to methodology in current Grasslands monitoring program*

   - *Quarterly reporting of monthly Load reductions*

   Schedule:

   Critical Milestones:

   Reporting Commitment: In the quarterly reports required by the MAA, Reclamation will use the described methodology. A sample quarterly report is attached as Appendix 2.

2. Westside Regional Drainage Program

   Brief Description: talk to Mike Delamore as start (also GBP above)

   Methodology: *(include data source and qa procedures in each methodology)*

   - *Quarterly reporting of monthly Load reductions*

   Schedule:*?*

   Critical Milestones:

   Reporting Commitment: In the quarterly reports required by the MAA, Reclamation will use the described methodology. A sample quarterly report is attached as Appendix 2.

3. Conservation Efforts

   Brief Description:

   Methodology: *(include data source and qa procedures in each methodology)*

   - Funding by program, status of funded projects
   - Cumulative results of funded efforts (actual conservation)
   - Methodology employed (per project, or uniform)
   - *Suggest looking at CALFED WUE report to see if they catalog or propose measurement methodology*
   - *Quarterly reporting of monthly Load reductions*

   Schedule: *do we have a schedule for water purchases under various programs?*

   Critical Milestones:

Reporting Commitment: In the quarterly reports required by the MAA, Reclamation will use the described methodology. A sample quarterly report is attached as Appendix 2.

C. Mitigation Actions

In the Action Plan, Reclamation identifies two mitigation actions to reduce salinity loads: a real time management program to maximize the removal of salt using assimilative capacity in the San Joaquin River, and a wetlands BMP plan to research and potentially develop practices to reduce salinity loading from managed wetlands. Reclamation has actively supported the development of a real time monitoring and forecasting program in the River and in managed wetlands.

1. Real Time Management Program – Development of Stakeholder-Driven Program

Brief Description: The Real Time Management Program is described in the TMDL as a stakeholder driven effort to use "real-time" water quality and flow monitoring data to support water management operations in order to maximize the use of assimilative capacity in the San Joaquin River. The Regional Board describes this assimilative capacity as up to 80% of the load determined by Vernalis salinity objective. Reclamation has contracted with a facilitation firm to support the development of a stakeholder-driven program.

Methodology: event driven

- *RTMP (Cozad) process goals/schedule*

Schedule: *schedule developed for Daniel effort*

Critical Milestones:

Reporting Commitment: In the quarterly reports required by the MAA, Reclamation will use the described methodology. A sample quarterly report is attached as Appendix 2.

2. Real Time Management Program – Technical Support

Brief Description: A successful RTMP will require a real time monitoring network and a model capable of reasonably accurate forecasting of assimilative capacity. Reclamation is committed to participation in and support of the development of these tools. Reclamation staff has valuable experience in both of these areas. The technical support of this program will follow the stakeholder process.

Methodology: *(event driven, calibration/verification of tools)*

- Survey of existing tools/monitoring points
- Identify data/analysis gaps
- Stakeholder subgroup to scope and manage technical support efforts

Schedule: *dependent on action 1*

Critical Milestones: Successful stakeholder Process is critical.

Reporting Commitment: In the quarterly reports required by the MAA, Reclamation will use the described methodology. A sample quarterly report is attached as Appendix 2.

3. Wetlands BMP Plan

Brief Description: Plan implementation? Pilot study? Other study with funding? Need to talk with Mike Heaton to develop this

Methodology: *(include data source and qa procedures in each methodology)*

- *Goals of the pilot studies should be described and reported.*
- *Tasks*
- *Expected results, leading to what next steps*

Schedule:
Critical Milestones:
Reporting Commitment: In the quarterly reports required by the MAA, Reclamation will use the described methodology. A sample quarterly report is attached as Appendix 2.

D. Baseline Determination

Need to describe how DMC salt import is calculated, what data used, how Reclamation will estimate monthly salt load that needs reductions or offsets. May also consider what Delta actions were taken to reduce that salt load, and model to determine reduction? (or does it matter?)

E. Summary of Actions

Describe how actions will be summarized, ensure no overlap of actions. I've tried to develop methodology that would make each implementation action comparable, so you could add them up and then compare to the baseline load.

F. Reporting Requirements

In the MAA, Reclamation agreed to provide quarterly reports to the Regional Board. A sample quarterly report is attached as Appendix 2. Reclamation will consult with the Regional Board before proposing any changes to the sample report format. Quarterly reports are due 45 days after the end of the calendar quarter (*I didn't actually count out days, this is template*):

End of calendar quarter	Due date of Quarterly report
March 31, 2009	May 15, 2009
June 30, 2009	August 15, 2009
September 30, 2009	November 15, 2010
December 31, 2009	February 15, 2010
March 31, 2010	May 15, 2010
June 30, 2010	August 15, 2010
September 30, 2010	November 15, 2010
December 31, 2010	February 15, 2011

G. Funding Reporting

In the MAA, Reclamation agreed to seek additional funding, including grant funding, to support salinity control efforts. In its quarterly reports, Reclamation will report on its efforts to support the securing of additional funding.

H. Monitoring Program

To support the actions described in this Draft Plan and to support evaluation of salinity loads, Reclamation will work with the Regional Board to develop a monitoring program. As a first step, Reclamation has identified existing monitoring data to support its evaluations of baseline, reductions, and offsets. (*perhaps summarize existing, list steps to formalize a process/program?)*

I. Offset Program

Reclamation will also work with the Regional Board to develop an offset program. The offset calculations and summations proposed in this Draft Plan represent the fundamental elements of this program.